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L6: Entry 1 of 2 File: JPAB Jan 10, 1997

PUB-NO: JP409007224A
DOCUMENT-IDENTIFIER: JP 09007224 A
TITLE: RECORDING MEMBER AND RECORDING METHOD AND RECORDING DEVICE USING THE SAME MEMBER

PUBN-DATE: January 10, 1997

INVENTOR-INFORMATION:

NAME	COUNTRY
MIYAUCHI, YASUSHI	
TERAO, MOTOYASU	
NISHIDA, TETSUYA	
HIROTSUNE, AKEMI	

ASSIGNEE-INFORMATION:

NAME	COUNTRY
HITACHI LTD	
HITACHI MAXELL LTD	

APPL-NO: JP07158243
APPL-DATE: June 26, 1995

INT-CL (IPC): G11B 7/24; G11B 7/00; G11B 11/10

ABSTRACT:

PURPOSE: To enable accurate multi-valued recording with good reproducibility by using a multilayered recording member in which reflectance in the same position is changed stepwise and an almost same recording mark can be formed in each recording layer when information is recorded or rewrited by irradiation of energy beams.

CONSTITUTION: The recording member has a multilayers structure comprising phase transition recording films (A) 4, (B) 6 and (C) 8 having different recrystallization times after fused and dielectric layers 5, 7 among the recording films. When recording or rewriting is done in this recording member, the recording waveform is controlled in such a manner that the power is the level to melt the whole recording films and that either the power level falling just after the recording pulse or the holding time of the low power level after falling is changed, or both of these waveforms are changed according to the information signal to be recorded. Thereby enabling multilevel recording with good reproducibility according to the recording waveform in the same position.

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L5: Entry 25 of 32 File: DWPI Jan 10, 1997

DERWENT-ACC-NO: 1997-124015
DERWENT-WEEK: 199712

TITLE: Information recording method e.g. for multivalue recording medium - involves setting recrystallization time to change multilayer recording film from amorphous state to crystal state during cooling

PATENT-ASSIGNEE:

ASSIGNEE	CODE
HITACHI LTD	HITA
HITACHI MAXELL KK	HITM

PRIORITY-DATA: 1995JP-0158243 (June 26, 1995)

PATENT-FAMILY:

PUB-NO	PUB-DATE	LANGUAGE	PAGES	MAIN-IPC
JP 09007224 A	January 10, 1997		011	G11B007/24

APPLICATION-DATA:

PUB-NO	APPL-DATE	APPL-NO	DESCRIPTOR
JP09007224A	June 26, 1995	1995JP-0158243	

INT-CL (IPC): G11B 7/00; G11B 7/24; G11B 11/10

ABSTRACTED-PUB-NO: JP09007224A
BASIC-ABSTRACT:

The method involves irradiating the laser light beam based on the information to be recorded, on a multilayer recording film. Thereby multivalue recording at same place in the multilayer recording film is carried out.

The multilayer recording film is formed on the substrate through the dielectric layers. The recrystallization time taken to change the multilayer recording film from the amorphous state to the crystal state during cooling is made to have different value, at different place, after fusion.

ADVANTAGE - Facilitates variation of reflecting rate in same place. Enables reliable and good multivalue recording/reproduction. Improves utilization of reliable repetition recording.

CHOSEN-DRAWING: Dwg.1/5

TITLE-TERMS: INFORMATION RECORD METHOD RECORD MEDIUM SET TIME CHANGE MULTILAYER RECORD FILM AMORPHOUS STATE CRYSTAL STATE COOLING

DERWENT-CLASS: T03 W04

EPI-CODES: T03-B; T03-B01; T03-D; W04-C; W04-C01; W04-D;

SECONDARY-ACC-NO:
Non-CPI Secondary Accession Numbers: N1997-102290

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Derwent World Patents Index
IBM Technical Disclosure Bulletins

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Search History

Today's Date: 11/19/2001

DB Name	Query	Hit Count	Set Name
USPT,PGPB,JPAB,EPAB,DWPI,TDBD	l19 and l14	34	L20
USPT,PGPB,JPAB,EPAB,DWPI,TDBD	((phase or phasechang$4) near5 (layer$1 or film$1)) with l17	428	L19
USPT,PGPB,JPAB,EPAB,DWPI,TDBD	((phase or phasechang$4) near5 (layer$1 or film$1)) same l17	443	L18
USPT,PGPB,JPAB,EPAB,DWPI,TDBD	(another or second or lower or upper) adj2 ((phase or phasechang$4 or getesb or recording or intesb or insbte or getesb or aginsb or inagsb) adj2 (layer$1 or film$1))	1774	L17
USPT,PGPB,JPAB,EPAB,DWPI,TDBD	l13 same l14	280	L16
USPT,PGPB,JPAB,EPAB,DWPI,TDBD	l13 and l14	345	L15
USPT,PGPB,JPAB,EPAB,DWPI,TDBD	((phase or phasechang$4) near5 (layer$1 or film$1)) with l7	1910	L14

USPT,PGPB,JPAB,EPAB,DWPI,TDBD	((phase or phasechang$4) near5 (layer$1 or film$1)) with l1	4366	L13
USPT,PGPB,JPAB,EPAB,DWPI,TDBD	l7 with l10	1214	L12
USPT,PGPB,JPAB,EPAB,DWPI,TDBD	l7 same l10	1563	L11
USPT,PGPB,JPAB,EPAB,DWPI,TDBD	(another or second or lower or upper) near2 ((phase or phasechang$4 or getesb or recording or intesb or insbte or getesb or aginsb or inagsb) near2 (layer$1 or film$1))	5332	L10
USPT,PGPB,JPAB,EPAB,DWPI,TDBD	l1 same l7	2779	L9
USPT,PGPB,JPAB,EPAB,DWPI,TDBD	l3 same l7	22	L8
USPT,PGPB,JPAB,EPAB,DWPI,TDBD	((optical or laser or information) near5 (medium or media or disk$1 or disc$1))	270822	L7
USPT,PGPB,JPAB,EPAB,DWPI,TDBD	jp-03275382-$.did.	2	L6
USPT,PGPB,JPAB,EPAB,DWPI,TDBD	jp-09007224-$.did.	2	L5
USPT,PGPB,JPAB,EPAB,DWPI,TDBD	(multilevel$4 or mulitlayer$4 or multivalue$2) near8 ((phase or phasechang$4 or getesb or recording or intesb or insbte or getesb or aginsb or inagsb) near3 (layer$1 or film$1))	32	L4
USPT,PGPB,JPAB,EPAB,DWPI,TDBD	((phase near3 control$6) near5 (layer$1 or film$1))	945	L3
USPT,PGPB,JPAB,EPAB,DWPI,TDBD	((phase near3 control$6) near5 (layer$1 or film$1))	945	L2
USPT,PGPB,JPAB,EPAB,DWPI,TDBD	(another or second or lower or upper) near8 ((phase or phasechang$4 or getesb or recording or intesb or insbte or getesb or aginsb or inagsb) near3 (layer$1 or film$1))	12589	L1

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L21: Entry 23 of 34 File: JPAB Jul 5, 1991

PUB-NO: JP403157830A
DOCUMENT-IDENTIFIER: JP 03157830 A
TITLE: OPTICAL INFORMATION RECORDING MEDIUM

PUBN-DATE: July 5, 1991

INVENTOR-INFORMATION:
NAME COUNTRY
AKAHIRA, NOBUO
NISHIUCHI, KENICHI
OSADA, KENICHI

ASSIGNEE-INFORMATION:
NAME COUNTRY
MATSUSHITA ELECTRIC IND CO LTD

APPL-NO: JP01296536
APPL-DATE: November 15, 1989

US-CL-CURRENT: 369/284
INT-CL (IPC): G11B 7/24

ABSTRACT:

PURPOSE: To realize high density recording, erasing and rewriting by forming two layers of thin film materials which show changes in the optical constants with irradiation of laser light on a substrate, and detecting the change in the total reflectance or transmittance due to the phase change of the reflected or transmitted light before and after the optical properties of the thin film layers change.

CONSTITUTION: On a substrate 1, there formed are a first transparent layer 2 having different refractive index to the substrate 1, the first recording thin film layer 3, second transparent layer 4, second recording thin film layer 5, third transparent layer 6, and further a reflecting layer 7. Thickness of the first transparent layer 2, first recording thin film layer 3, second transparent layer 4, second recording thin film layer 5, third transparent layer 6, and reflecting layer 7 are determined so as to change the phase of transmitted or reflected light when the medium is irradiated with light after the optical properties of the medium change. Thus, the medium has high recording density although it is a phase-transition recording type and is rewritable for such a recording method using phase changes of light which enable erasing and rewriting.